

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

|             |                         |                               |
|-------------|-------------------------|-------------------------------|
| Applicants: | RONALD W. KORZUN ET AL. | )                             |
|             |                         | ) Group Art Unit: 3745        |
| Serial No:  | 10/708,909              | )                             |
|             |                         | ) Examiner: Edgar, Richard A. |
| Filed:      | March 31, 2004          | )                             |
|             |                         | ) Confirmation No. 2908       |
| For:        | INTEGRAL COVERED NOZZLE | )                             |
|             | WITH ATTACHED OVERCOVER | )                             |

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, VA 22313-1450

In response to the Final Office Action mailed September 15, 2006, and in conjunction with the Notice of Appeal filed concurrently herewith, the Applicants submit the following remarks in support of the Pre-Appeal Brief Request for Review. Applicants hereby petition for a one-month extension of time.

## REMARKS

Claims 1-3 and 10-12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,702,221 to Ortolano ("Ortolano '221" hereinafter) in view of U.S. Patent No. 5,215,432 to Pickering et al. ("Pickering" hereinafter). Applicants respectfully disagree.

Referring to MPEP 2143.03, Applicants respectfully point out that in order to establish *prima facie* obviousness of a claimed invention, "all the claim limitations must be taught or suggested by the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made." Applicants' claim 1 recites in part,

"multiple stationary nozzle blades supported by a turbine stator ...multiple respective cover portions defining a first surface configured to span tips of multiple adjacent nozzle blades, and...an overcover coupled to a second surface opposite said first surface of said respective cover portions."

Taken together, Ortolano '221 and Pickering do not teach or suggest an overcover coupled with a cover configured to the span tips of stator nozzles, as is claimed in Applicants' claim 1. On the contrary, Ortolano '221 only teaches a rotor and associated rotor blades. This has not been a point of contention between the Applicant and Examiner with regards to the 103 rejection. Referring to Pickering Figure 1, Pickering only teaches an outer shroud 10, without an overcover. Like with Ortolano '221, this is also not a point of contention.

However, Applicant respectfully disagrees with the Examiner's conclusion that the overcover of the rotor blades of Ortolano '221 could be obviously combined with the nozzle blades of Pickering because the nozzle blades of Pickering and rotor blades of Ortolano '221 are both usable in turbine engines and may be subject to some of the same stresses. The proposed obvious combination of the overcover of Ortolano '221 and the nozzle blades of Pickering is improper because the rotor blade and nozzle blade are differently constructed elements of a turbine engine, which perform different tasks and are subject to different stresses within the turbine engine.

For example, cover steady state stresses for nozzle blades are different than those of rotor blades. The stresses for nozzles point radially inward. The cover expansion will "fight" nozzle inward growth, which is different from rotating blades that are supported from the inner diameter and are growing outward. Thus, contrary to Examiner's contention that rotor blades and nozzle blades are subject to the same stresses, Applicant respectfully submits that the inward growth of the nozzle blades is a different stress than the outward growth of the rotor blades. As such, proper design execution of the overcover

nozzle blade arrangement requires further design, analysis and assembly test rigor, which is not taught in either Ortolano '221 or Pickering. Since the blade-designed overcover of Ortolano '221 is not taught to be effective or used with nozzle blades, it would not be obvious to one skilled in the art to modify or combine Ortolano '221 and Pickering to teach a cover that is "configured to span tips of multiple adjacent nozzle blades." Therefore, Applicant respectfully submits that Applicant's claim 1, or claims 2-3 that depend therefrom are not obvious over the combination of Ortolano '221 and Pickering.

Similarly, method claim 10 claims in part,

"attaching multiple stationary nozzle blades supported by a turbine stator with multiple respective cover portions configured to span tips of multiple adjacent nozzle blades...and coupling an overcover to a second surface opposite said first surface of said respective cover portions."

Again, referring to the above-discussion, it would not be obvious to one skilled in the art to modify or combine Ortolano '221 and Pickering to teach a cover that is "configured to span tips of multiple adjacent nozzle blades." Therefore, Applicant respectfully submits that Applicant's claim 10, or claims 11-12 that depend therefrom are not obvious over the combination of Ortolano '221 and Pickering.

In addition, MPEP 2143.01 section I states that, "there are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art," *In re Rouffet*, 149 F.3d 1350. As was mentioned above, an overcover of a nozzle blade would be subject to different stresses (fighting of inward growth as opposed to fighting of outward growth). Ortolano '221 teaches an overcover for rotor blades that is inherently designed to solve the problem of outward growth of the blades. Pickering teaches stator nozzles that are inherently subject to the stresses of inward growth. As such, the nature of the problem to be solved in Pickering would be to fight nozzle inward growth, while the nature of the problem to be solved in Ortolano '221 is the fighting of outward growth. Thus, the nature of the problem to be solved in each reference is different.

Since there is also no explicit or implicit teaching in the prior art that would suggest combination of Ortolano '221 and Pickering, and, being that these references involve different components that are subject to different stresses, there is no objective reason for persons of ordinary skill in the art to combine the references (the objective reason being required by *In re Mills*, 916 F.2d 680). Therefore, Applicant respectfully submits that a combination of Ortolano '221 and Pickering is not supported by any of the three sources discussed above.

Applicants respectfully assert that claims 1-3 and 10-12 are allowable over Ortolano in view of Pickering.

Claims 1-4 and 10-13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,238,368 to Ortolano (Ortolano '368 hereinafter) in view of U.S. Patent No. 2,315,641

to Mosser (Mosser hereinafter), and further in view of Pickering.

Since Ortolano '368 (like Ortolano'221) only teaches an overcover for a rotor blade, and Mosser only teaches a connecting cover (tie bands) for a rotor blade, Applicant respectfully submits that for the same reasons as discussed above, it would not be obvious to one skilled in the art to modify or combine Ortolano '368, Pickering, and Mosser to teach a cover that is "configured to span tips of multiple adjacent nozzle blades." As such Applicant's claims 1 and 10, and claims 2-4 and 11-13 that depend respectively therefrom, are not obvious over this combination.

Claims 5, 14, and 18 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ortolano '221 in view of Pickering, and further in view of United States Patent No. 2,277,484 to Flanders ("Flanders" hereinafter). As claim 5 depends from claim 1, and claims 14 and 18 depend from claim 10, for the same reasons as discussed above, it would not be obvious to one skilled in the art to modify or combine Ortolano '221 and Pickering to teach all of the elements of claims 5, 14, and 18. As Flanders also does not teach or suggest an overcover coupled with a cover configured to the span tips of stator nozzles, it would also not be obvious to one skilled in the art to modify or combine Ortolano '221, Pickering, and Flanders to teach all of the elements of claims 5, 14, and 18. Applicants respectfully assert that claims 5, 14, and 18 are not obvious over this combination.

Claims 4 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ortolano '221 in view of Pickering, and further in view of Mosser. As claim 4 depends from claim 1, and claim 13 depends from claim 10, for the same reasons as mentioned above, it would not be obvious to one skilled in the art to modify or combine Ortolano '221 and Pickering to teach all of the elements of claims 4 and 13. As Mosser also does not teach or suggest an overcover coupled with a cover configured to the span tips of stator nozzles, it would not be obvious to one skilled in the art to modify or combine Ortolano '221, Pickering, and Mosser to teach all of the elements of claims 4 and 13. Applicants respectfully assert that claims 4 and 13 are not obvious over this combination.

Claims 6, 7, 8, and 9 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ortolano '221 in view of Pickering, in view of Flanders, and further in view of Ortolano '368. As claims 6-9 depend from claim 1, for the same reasons as mentioned above, it would not be obvious to one skilled in the art to modify or combine Ortolano '221 and Pickering to teach all of the elements of claims 6-9. As Flanders and Ortolano '368 also do not teach or suggest an overcover coupled with a cover configured to the span tips of stator nozzles, it would not be obvious to one skilled in the art to modify or combine Ortolano '221, Pickering, Ortolano '368, and Flanders to teach all of the elements of claims 6-9. Applicants respectfully assert that claims 6-9 are not obvious over this combination.

Claims 15-17 and 19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Ortolano '221 in view of Pickering, and further in view of Ortolano '368. As claim 15-17 and 19 depend

from claim 10, for the same reasons as mentioned above, it would not be obvious to one skilled in the art to modify or combine Ortolano '221 and Pickering to teach all of the elements of claims 15-17 and 19. As Ortolano '368 also does not teach or suggest an overcover coupled with a cover configured to the span tips of stator nozzles, it would not be obvious to one skilled in the art to modify or combine Ortolano '221, Pickering, and Ortolano '368 to teach all of the elements of claims 15-17 and 19. Applicants respectfully assert that claims 15-17 and 19 not obvious over this combination.

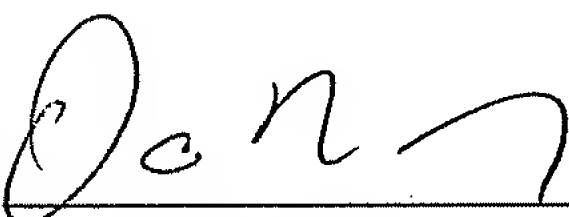
Applicants respectfully assert that all of the rejections are herein overcome. No new matter is added by way of the present Amendments or Remarks, as support is found throughout the original filed specification, claims, and drawings. Notice of Allowance is respectfully requested.

In the event that a Notice of Allowance is not granted, Applicants respectfully request a telephonic interview with the Examiner before mailing of a next Action.

If there are any additional charges with respect to this response or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicants' attorney.

Respectfully submitted,

CANTOR COLBURN LLP

By: 

Daniel R. Gibson  
Registration No. 56,539  
55 Griffin Road South  
Bloomfield, CT 06002  
Telephone: (860) 286-2929  
Facsimile (860) 286-0115  
Customer No. 23413

Date: January 15, 2007